AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in this application.

1. (Currently Amended) An adsorbent comprising:
   a) 20-30% porous carbon with incorporated organic nitrogen species; and
   b) 70-80% inorganic matter derived from sewage sludge.

2. (Original) The adsorbent of claim 1, wherein the inorganic matter includes highly dispersed catalytic oxides.

3. (Original) The adsorbent of claim 2, wherein the catalytic oxides are one or more of copper oxide, zinc oxide, iron oxide, calcium oxide, silica and alumina.

4. (Original) The adsorbent of claim 1, wherein the nitrogen species comprises amine or pyridine groups.

5. (Original) The adsorbent of claim 1, wherein the surface area of the adsorbent is 100-500 m^2/g.

6. (Original) The adsorbent of claim 5, wherein the surface area of the adsorbent is 100-200 m^2/g.

7. (Original) The adsorbent of claim 1, wherein the adsorbent contains micropores and the volume of the micropores are at least 0.03 cm^3/g.

8. (Original) The adsorbent of claim 1, wherein the pH of the adsorbent is greater than 10.

9. (Original) The adsorbent of claim 1, wherein the pH of the adsorbent is between 7 and 10.

10. (Original) The adsorbent of claim 1, wherein the pH of the adsorbent is between 4 and 7.

11. (Currently Amended) A method of making an adsorbent which comprises:

a) thermally drying dewatered sewage sludge to form granulated organic fertilizer; and

b) pyrolyzing ~~said~~ the organic fertilizer at temperatures between 600 and 1000°C.

12. (Original) The method of claim 11, wherein the heating rate is between 5 and 10 °C/minute and the hold time is between 60 and 90 minutes.

13. (Original) The method of claim 11, wherein the temperature of pyrolysis is between 800 and 1000°C.

14. (Original) The method of claim 13, wherein the temperature of pyrolysis is between 900 and 1000°C.

15. (Original) The method of claim 11, wherein the temperature of pyrolysis is between 600 and 900 °C and the adsorbent is further treated with 15-20% HC1.

16. (Original) The method of claim 15, wherein the temperature of pyrolysis is between 800 and 900 °C.

17. (Original) An adsorbent formed by the method of claim 11.

18. (Currently Amended) The process of removing acidic gases from wet air streams comprising putting an adsorbent comprising 20-30% porous carbon with incorporated organic nitrogen species and 70-80% inorganic matter derived from sewage sludge in contact with the wet air stream and allowing the adsorbent to adsorb the acidic gases.

19. (Original) The process of claim 18, wherein the acidic gases are one or more of hydrogen sulfide, sulfur dioxide, hydrogen cyanide, and nitrogen dioxide.

20. (Original) The process of claim 18, wherein the acidic gas is hydrogen sulfide which reacts with inorganic matter to be oxidized to sulfur dioxide or elemental sulfur and salt forms thereof.

21. (Original) The process of claim 18, wherein the wet air stream is effluent from a sewage treatment plant, gaseous fuel, or gases from hydrothermal vents.

22. (Original) The process of removing acidic gases from wet air streams comprising forming an adsorbent by thermally drying dewatered sewage sludge to form granulated organic fertilizer and pyrolyzing said organic fertilizer at temperatures between 600-1000 °C, putting said adsorbent in contact with the wet air stream, and allowing the adsorbent to adsorb the acidic gases.

23. (Original) The process of claim 22, wherein the acidic gases are one or more of hydrogen sulfide, sulfur dioxide, hydrogen cyanide, and nitrogen dioxide.

24. (Original) The process of claim 22, wherein the temperature of pyrolysis is between 800 and 1000 °C.

25. (Original) The process of claim 24, wherein the temperature of pyrolysis is between 900 and 1000 °C.

26. (Original) The process of claim 22, wherein the temperature of pyrolysis is between 600 and 900 °C and the adsorbent is further treated with 15-20% HCl.

27. (Original) The process of claim 26, wherein the temperature of pyrolysis is between 800 and 900 °C.

28. (Original) The process of claim 22, wherein the adsorbent may be regenerated by heating to 300-500 °C to remove elemental sulfur and sulfur dioxide.